

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) An image processing method of selectively eliminating a line
an individual line segment implemented by an image processing apparatus, the line segment
having only two end points from a line-shaped image object overlapping a moving image
object in one image comprising effective or ineffective pixels, from the moving image object,
the method comprising the respective steps of:

a line segment extraction step for selectively extracting the individual line segment
having only two end points from the line-shaped image object by a line segment extraction
means of the image processing apparatus;

an elimination step for eliminating the ~~line segment having only two end points from~~
line-shaped image object from the moving image object by a line-shaped image elimination
means of the image processing apparatus;

a pixel extraction step for scanning a vicinity region of the individual line segment
having only two end points on the moving image object and sequentially extracting pixels to
be scanned by an image scan means of the image processing apparatus;

an effective pixel determination step for determining whether or not the extracted
pixels to be scanned are the effective pixels by an effective pixel determination means of the
image processing apparatus; and

a pixel interpolation step for dropping a perpendicular from the pixels to be scanned
that are determined to be the effective pixels at the effective pixel determination step to a
nearest individual line segment and setting ~~all the pixels~~ each individual pixel on the

perpendicular as the effective pixels by a pixel interpolation means of the image processing apparatus.

2. (Previously Presented) An image processing method according to claim 1, wherein the image is one frame in a moving image comprising a plurality of frames.

3. (Previously Presented) An image processing method according to claim 1, wherein the image is an image obtained by subjecting a single frame or plural frames in a moving image comprising the plurality of frames to predetermined arithmetic processing.

4. (Previously Presented) An image processing method according to claim 3, wherein the arithmetic processing is any one of processing for determining a difference between two arbitrary frames in the moving image or processing for determining a change region in one arbitrary frame in the moving image.

5. (Previously Presented) An image processing method according to claim 4, wherein the processing for determining the change region in the one arbitrary frame in the moving image is processing for extracting predetermined frames before and after the one frame and obtaining difference images between each predetermined frame and the one frame, respectively as well as executing an ANDing operation of both of the difference images.

6. (Currently Amended) An image processing method according to claim 1, wherein the individual line segment having only two end points is selectively extracted using a Hough transform at the line segment extraction step.

7. (Currently Amended) An image processing apparatus for selectively eliminating-a line- an individual line segment having only two end points from a line-shaped image object overlapping a moving image object in a single image comprising effective or ineffective pixels, from the moving image object, the apparatus comprising:

a line segment extraction means for selectively extracting the individual line segment having only two end points from the line-shaped image object;

a line-shaped image elimination means for eliminating the ~~line segment having only two end points from~~ line-shaped image object from the moving image object;

an image scan means for scanning a vicinity region of the individual line segment having only two end points on the moving image object and sequentially extracting pixels to be scanned;

an effective pixel determination means for determining whether or not the extracted pixels to be scanned are the effective pixels; and

a pixel interpolation means for dropping a perpendicular from the pixels to be scanned that are determined to be the effective pixels at the effective pixel determination step to a nearest line segment and setting ~~all the pixels~~ each individual pixel on the perpendicular as the effective pixels.

8. (Previously Presented) An image processing apparatus according to claim 7 comprises a frame extraction means for extracting one frame from a moving image comprising a plurality of frame and uses one frame extracted by the frame extraction means as an image.

9. (Previously Presented) An image processing apparatus according to claim 7 comprises a frame extraction means for extracting a single frame or a plurality of frames from a moving image comprising a plurality of frames and a frame arithmetic processing means for subjecting an extracted frame to predetermined arithmetic processing and uses a result of the arithmetic processing as the image.

10. (Previously Presented) A image processing apparatus according to claim 9, wherein the frame arithmetic processing means executes any processing of processing for determining a difference between two arbitrary frames in the moving image and processing for determining a change region in one arbitrary frame in the moving image.

11. (Previously Presented) An image processing apparatus according to claim 10, wherein, the processing executed by the frame arithmetic processing means to determine the change region in the one arbitrary frame is processing for extracting predetermined frames before and after the one frame and obtaining difference images between each predetermined

frame and the one frame, respectively as well as executing an ANDing operation of both of the difference images.

12. (Currently Amended) An image processing apparatus according to claim 7, wherein the line segment extraction means selectively extracts the individual line segment having only two end points using a Hough transform.

13-14. (Cancelled)

15. (New) An image processing apparatus for eliminating a line segment having only two end points from a line-shaped image object overlapping a moving image object in a single image comprising effective or ineffective pixels, from the moving image object, the apparatus comprising:

a line segment extraction means for extracting the line segment having only two end points from the line-shaped image object;

a line-shaped image elimination means for eliminating the line segment having only two end points from line-shaped image object from the moving image object;

an image scan means for scanning a vicinity region of the line segment having only two end points on the moving image object and sequentially extracting pixels to be scanned;

an effective pixel determination means for determining whether or not the extracted

pixels to be scanned are the effective pixels;

a pixel interpolation means for dropping a perpendicular from the pixels to be scanned that are determined to be the effective pixels at the effective pixel determination step to a nearest line segment and setting all the pixels on the perpendicular as the effective pixels;

a frame extraction means for extracting a single frame or a plurality of frames from a moving image comprising a plurality of frames; and

a frame arithmetic processing means for subjecting an extracted frame to predetermined arithmetic processing and uses a result of the arithmetic processing as the image,

wherein the frame arithmetic processing means executes any processing for determining a difference between two arbitrary frames in the moving image and processing for determining a change region in one arbitrary frame in the moving image,

wherein the processing executed by the frame arithmetic processing means to determine the change region in the one arbitrary frame is processing for extracting predetermined frames before and after the one frame and obtaining difference images between each predetermined frame and the one frame, respectively as well as executing an ANDing operation of both of the difference images.